fundamentally different. Indeed, "when an industry is changing rapidly, merger cases cannot be decided solely on the basis of historical precedents in that industry—even when the precedents are from the relatively recent past."[327] Instead, it is necessary to take into account the "fundamental changes in the structure of the market."[328]

The Commission must review this merger in light of record evidence demonstrating intense competition in the audio entertainment market. The evidence shows that satellite radio is one of many options and, in fact, one of the least used options that consumers have for accessing audio entertainment today. Thus, even after a satellite radio merger, many competitors would remain, including free over-the-air AM/FM radio, which dominates the market by a substantial margin.

Satellite radio is a growing but relatively minor player in today's audio market. Moreover, its major competitor, AM/FM radio, is ubiquitous throughout the nation and does not depend on satellite radio or any other subscription service for distribution. As such, the competitive market in which satellite radio competes is completely different from the one in which DBS competed in 2002.

In short, the proposed XM-Sirius merger comes at a time of strong and growing competition in audio entertainment. In fact, in contrast to the DBS context, even a merged XM-Sirius would possess a slight market share and be constrained by the multiplicity of other media. Accordingly, conclusions from the DIRECTV and EchoStar decision should not be raised as a

327 *Federated Department Stores, Inc./The May Department Stores Co.*, Statement of the Comm'n, Fed. Trade Comm'n, FTC File No. 051-0111, 2 (Aug. 30, 2005), http://www.ftc.gov/os/caselist/0510001/050830stmt0510001.pdf.

328 *U.S. v. General Dynamics Corp.*, 415 U.S. 486, 500 (1974).

barrier to the proposed merger.

B. The Commission's Report to Congress on Satellite Competition Does Not *Prejudge the Outcome of the Transaction.*

In March 2007, the FCC released a report on the status of competition in the satellite industry.[329] Some merger opponents claim that this report reveals the companies' market dominance because it states that Sirius and XM are the only participants in the satellite radio market.[330] However, because the document is specifically a *satellite* report, the FCC limited its review to satellite companies and did not discuss or consider the effect of other sources of audio entertainment on competition. In fact, the FCC specifically "emphasize[d] that the market descriptions included in this Report are intended to facilitate discussion of satellite markets and services . . . and may not reflect the appropriate markets to be considered in other Commission proceedings, *including merger reviews*, rulemakings involving the Commission's ownership rules, or other reports to Congress."[331]

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329 *Annual Report and Analysis of Competitive Market Conditions with Respect to Domestic and International Satellite Comm'cns Servs.*, First Report, 22 FCC Rcd 5954 (2007) ("*Satellite Report*").

330 *See* NAB at 23-24; NAB Coalition at 6-7.

331 *Satellite Report* at 5964 (¶ 27) (emphasis added). The Commission further stated that "[a]ny individual proceeding in which the Commission defines relevant product and geographic markets"—including "an application for approval of a license transfer"—might "present facts pointing to narrower or broader markets than any used, suggested, or implied in this report." *Id.* at 5963, n.48 (¶ 24). Moreover, opponents' arguments regarding the market share of satellite radio are without support because the *Satellite Report* acknowledges that the FCC "lack[s] the requisite data to determine specific market shares for" satellite radio. *Id.* at 5978 (¶ 74). The Commission's analysis was only "retrospective," focusing on competition from 2000 through the end of 2006, and did not account for any possible future market developments. *Id.* at 5955 (¶ 1).

VII. ATTACKS ON THE COMPANIES' "CHARACTER" ARE INCORRECT AND IRRELEVANT.

As the companies explained in their application, the Commission has consistently held that XM and Sirius are qualified FCC licensees.[332] The NAB and others, however, seek to cloud the record with several challenges to the companies' "character" that are neither relevant to this proceeding nor correct.

A. Allegations Made by Merger Opponents Do Not Raise "Character" Issues.

XM and Sirius take their obligations and responsibilities as FCC licensees seriously. But, claims by the NAB and others that the companies cannot be relied upon to comply with merger conditions due to alleged rule violations are little more than a rhetorical sideshow.[333] In any event, these allegations do not bear on the general qualifications of XM and Sirius as Commission licensees and do not cast doubt on their willingness to offer the merger-specific benefits discussed above.

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332 Application at 48-49.

333 NAB at 4, 50, 51; NABOB at 3, 8, 13-14; Entravision Holdings at 3, 19-20. The NAB makes these claims without apparent irony, but it should be noted that just in the last several months NAB members have paid tens of millions of dollars to U.S. Treasury to settle claims of FCC rule violations. In fact, one broadcaster, Univision, recently made a record $24 million payment to conclude a Commission investigation into violations of the agency's children's programming rules. *See Shareholders of Univision Comm'cns Inc. (Transferor) and Broad. Media Partners, Inc. (Transferee), For Transfer of Control of Univision Comm'cns, Inc. and Certain Subsidiaries, Licensees of KUVE-TV, Green Valley, Arizona, et al.*, Memorandum Opinion and Order, 22 FCC Rcd 5842, 5859 (¶ 42) (2007). Another group of broadcasters paid $12.5 million to resolve an investigation into alleged violations of the FCC's "payola" rules. Charles Babington, *Big Radio Settles Payola Charges*, WASHINGTON POST, Mar. 6, 2007, at D1; *see also* News Release, *Broadcasters Pay $12.5 Million to Resolve Possible "Payola" Violations* (Apr. 13, 2007). In each of these cases, however, the FCC determined that the violations did not call into question the licensees' qualifications to hold Commission licenses. Presumably, the NAB would agree with that outcome.

1. Interoperability

Opponents continue to suggest that XM and Sirius have violated a Commission mandate to develop, manufacture, or market an interoperable receiver,[334] but that is incorrect.

In its implementing rules for the satellite radio service, the FCC required all satellite radio licensees *to develop designs* for an interoperable radio[335] and to certify that they have done so.[336] Consistent with this requirement, Sirius' license contains a condition that Sirius certify "that its final receiver design is interoperable" with respect to XM's final receiver design,[337] and XM's license contains virtually the same condition.[338]

As the companies explained in the Application, they have fully complied with the Commission's requirement by certifying to the agency that they completed a design for an interoperable radio. In fact, their compliance has now been a matter of public record for over two years.[339]

Opponents' various attempts to obfuscate the requirement or misrepresent the companies'

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[334] NAB at 43, 44; Common Cause at 45-46; NAB Coalition at 3; NABOB at 3, 13-14; Entravision Holdings at 18.

[335] *See Establishment of Rules and Policies for the Digital Audio Radio Satellite Svc. in the 2310-2360 MHz Frequency Band*, Report and Order, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 12 FCC Rcd 5754, 5795-98 (¶¶ 102-07) (1997).

[336] 47 C.F.R. § 25.144(a)(3)(ii). Common Cause references a similar requirement in the settlement agreement of a patent dispute between the parties, which provided: "XM and Sirius shall each use commercially reasonable efforts to design and develop Interoperable Radios." Common Cause at 45.

[337] *Satellite CD Radio, Inc., Application for Authority to Construct, Launch and Operate Two Satellites in the Digital Audio Radio Service*, Order and Authorization, 13 FCC Rcd 7971, 7995 (¶ 57) (1997) ("*Sirius Authorization Order*").

[338] *XM Authorization Order*, 13 FCC Rcd at 8851 (¶ 54).

[339] Application at 15-16, n.37 (citing certification letters).

interpretation of the requirement are unavailing. The NAB cites no support for the proposition that "receiver interoperability was to occur prior to the initiation of" satellite radio service,[340] and there is none. Likewise, opponents have been unable to point to any Commission requirement that the companies produce, distribute, market or sell interoperable receivers.[341] And, despite the NAB's assertion, neither XM nor Sirius has offered an inconsistent interpretation of the requirement.[342]

2. FM Modulators

Last year, the FCC's Enforcement Bureau issued inquiries to both companies concerning the possibility that some of their receivers were non-compliant with Commission regulations. Sirius and XM each timely responded to these inquiries, and both have cooperated fully with the Enforcement Bureau in its investigation of this matter. All newly produced receivers are fully consistent with applicable regulations. Both companies will continue to work with the Commission until this matter is resolved completely.

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340 NAB at 53. In fact, the Commission stated simply that the companies would "have an opportunity to work among themselves" toward a final design "during the construction of their satellite systems." *Satellite Radio Authorization Order*, 12 FCC Rcd at 5797 (¶ 106).

341 NABOB at 8 ("the failure of Applicants to offer consumers an interoperable receiver undermines their assertion that they will provide diverse programming"); Clear Channel at 7. Parties that wish the rules had included such a requirement resort to invoking the "spirit" of the FCC's interoperability requirement, NAB Coalition at 12; criticizing the companies' interpretation, Common Cause at 45; opining on the Commission's "clear intent," NAB at 54; or when all else fails, simply continuing to misstate the requirement, Entravision Holdings at 18.

342 NAB at 54-55 & n.210. For example, the NAB quotes one sentence from XM's most recent 10-K filing in an apparent effort to show that XM has wavered in its view on its compliance, NAB at 54, but omits the language that precedes it: "The FCC conditioned our license on certification by us that our final receiver design is interoperable with the final receiver design of the other licensee, SIRIUS Radio, which uses a different transmission technology than we use. *We have previously certified and reconfirmed that we comply with this obligation.*" XM Satellite Radio Holdings Inc., 2006 SEC Form 10-K, at 13 (filed Mar. 1, 2007) (emphasis added).

3. Terrestrial Repeaters

Sirius and XM voluntarily brought their terrestrial repeater variances to the FCC's attention after taking unilateral actions to bring many of those variances into compliance. In October 2006, Sirius informed the Commission that eleven of its terrestrial repeaters had been operating at variance from their approved specifications.[343] Sirius has turned off each of the repeaters and filed requests with the agency to reauthorize them.[344] As Sirius explained in its requests, the repeaters were not at risk of causing harmful interference because, among other reasons, all but one of the subject repeaters were operating at or below currently authorized power levels and all but one was operating within 10 miles of its reported location.[345] In addition, to Sirius' knowledge, no party has experienced interference from the subject repeaters.

Similarly, XM voluntarily notified the FCC in October 2006 that its terrestrial repeater network "as built" varied from the authorizations that originally were granted for the construction of the network.[346] At that time, XM took steps to eliminate the largest variances by turning down the power levels of numerous repeaters and turning off the transmitters for others.[347] As XM explained to the Commission in its request to reauthorize its repeaters, the

343 Sirius Satellite Radio Inc., Request for 30-Day STA, File No. SAT-STA-20061013-00122 (filed Oct. 13, 2006) ("Sirius 30-Day STA Request"); Sirius Satellite Radio Inc., Request for 30-Day STA, File No. SAT-STA-20061013-00121 (filed Oct. 13, 2006) ("Sirius 180-Day STA Request").

344 *Id.*

345 *See id.*

346 XM Radio Inc., Request for 30-Day STA, File No. SAT-STA-20061002-00114 (filed Oct. 2, 2006).

347 XM Radio Inc., Request for 180-Day STA, File No. SAT-STA-20061013-00119, at 4 (filed Oct. 13, 2006).

network as built is far smaller and less powerful than what the Commission initially authorized *and thus should be far less troubling to licensees of adjacent spectrum.*[348] Moreover, to XM's knowledge, none of the variances has caused interference to any licensed service.

Again, since filing these requests, both Sirius and XM have been working diligently with Commission staff to resolve the issues concerning their existing repeaters and to ensure that their networks will be fully compliant with FCC rules in the future.

B. These Enforcement Matters Are Not Relevant to the Analysis of the Transaction.

The FCC repeatedly has rejected the notion that outstanding allegations of agency rule violations that can be addressed through the normal enforcement procedures have any bearing on a licensee's qualifications. Rather, the agency has made clear that "typically it will *not* consider in merger proceedings matters that are the subject of other proceedings before the Commission."[349] In this regard, the FCC further has noted that parties concerned about potential violations of agency regulations "have other, more appropriate, avenues for obtaining relief regarding [such] non-transaction specific issues.[350]

Ironically, the Commission emphasized these points in the decision that the NAB believes to be binding in every other respect—the 2002 DIRECTV-EchoStar decision.[351] There, several parties alleged that EchoStar had violated certain FCC rules and thus was not qualified to

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[348] *Id.* at 1.

[349] *SBC/Ameritech Order*, 14 FCC Rcd at 14,950 (¶ 571) (emphasis added) (quoting *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Southern New England Telecommunications Corporation to SBC Communications, Inc.*, Memorandum Opinion and Order, 13 FCC Rcd 21,292, 21,306 (¶ 29) (1998)).

[350] *Adelphia/Time Warner Order*, 21 FCC Rcd at 8306 (¶ 240).

[351] *See, e.g.*, NAB at 51 (referencing the "closely analogous" DIRECTV/EchoStar decision).

assume control over the licenses at issue.[352] The agency concluded that "[o]utstanding allegations regarding rule violations are best handled in proceedings arising under the affected rule or policy because, in such proceedings, the Commission would have a complete record to review the relevant facts."[353]

As explained above, the NAB's allegations here relate entirely to issues that already have been brought to the Commission's attention. To the extent the agency has found to be appropriate, it is addressing these matters through its traditional enforcement procedures. And as the NAB is well aware, it has the ability to air its grievances to the FCC through these mechanisms, and it has not hesitated to do so.[354] Accordingly, the issues raised by the NAB have no relevance to the Commission's review of the companies' merger.

In short, these issues do not cast any legitimate doubt on the qualifications of either Sirius or XM to serve as an FCC licensee or to merge. Both are in good standing with the Commission and, in fact, have long-time track records of regulatory compliance. Moreover, as demonstrated by their timely and cooperative responses to the terrestrial repeater and FM modulator issues, each company takes its responsibilities as a Commission licensee seriously and will continue to do so post-merger.

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352 *DIRECTV-EchoStar*, 17 FCC Rcd at 20,576-78 (¶¶ 29-31) (2002).

353 *Id.* at 20,579 (¶ 33).

354 *See, e.g.*, Letter from Marsha J. MacBride, NAB, to Hon. Kevin J. Martin, FCC (filed June 22, 2006), http://www.nab.org/xert/corpcomm/pressrel/filings/062206_Part15_study.pdf (last visited July 18, 2007) (attaching engineering study "to assess compliance of various FM modulator 'Part 15' devices with FCC rules").

VIII. THE COMMISSION SHOULD RESIST CALLS TO CONDITION THE MERGER IN WAYS THAT UNDERCUT ITS BENEFITS OR THAT DO NOT RELATE TO *THE TRANSACTION AT ALL.*

The Commission should not impose conditions in this proceeding that will have the effect of reducing the public interest benefits of the pending transaction or that are completely unrelated to the merger. The record shows that the public interest will be served by approval of this transaction and that consumers will benefit substantially from the combination of XM and Sirius. Unnecessary conditions would undermine these benefits. Specifically, any spectrum divestiture requirement could have substantial negative impacts on millions of existing customers, and on the companies that have invested millions of dollars developing products that rely on the existing platforms. Moreover, other proposed conditions are unnecessary, inappropriate for consideration in the context of this merger, or designed only to advance the business interests of their proponents.

A. The Record In This Proceeding Does Not Support the Imposition of Any Conditions on the Proposed Transaction.

An overwhelming majority of commenters support approval. Parties as diverse as the League of Rural Voters, the National Council of Women's Organizations, the African Methodist Episcopal Church, Free State Foundation, Women in Farm Economics, and the NAACP call on the Commission to approve the merger, citing the significant public interest and consumer benefits. In addition, unsolicited commenters from the general public support the merger by a ratio of more than three to one.

On the other hand, most of the opposition to this merger was generated by one group—the trade association for terrestrial radio broadcasters, state broadcaster associations, and individual broadcasters.[355] The NAB commissioned or funded virtually every "third-party" study opposing the merger.[356] Even the satellite radio "consumer" group opposing the merger is nothing more than an NAB surrogate.[357] The Commission should be wary of arguments from satellite radio's largest and most vocal competitors—parties with well-documented competitive motives—in the face of a mass of contrary supporting evidence.

B. Proposed Conditions are Unnecessary, Unrelated to the Merger, or Designed to Protect the Business Interests of the Proposing Parties.

The conditions proposed by various parties are: (1) unnecessary intrusions into the business plans of the merged company;[358] (2) completely unrelated to alleged merger-specific harms; or (3) attempts to subvert the Commission's authority in order to advance the proponents' business plans. The FCC should reject these proposals.

Some commenters propose conditions on satellite radio to provide leased access and set-asides for informational, local-into-local, and non-commercial educational programming.[359] But these conditions are unnecessary. Satellite radio already provides a tremendous range of public

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355 *See, e.g.*, Entravision Holdings; 46 Broadcasters; NABOB.

356 *See* Sidak Mar. 16 Decl. at 1, n.3.

357 *See supra* note 17.

358 For example, NPR proposes that the Commission adopt regulation of satellite radio that is "akin to telecommunications regulation under Title II of the Communications Act," including by requiring the merged company to essentially submit tariffs for Commission approval. NPR at 21-22. The significant competition faced by satellite radio in the audio entertainment market will be sufficient to ensure that satellite radio's prices remain competitive and there is no legal or policy justification to treat a one-way service such as satellite radio as a "common carrier." Similarly, requirements for the merged company to provide interoperable radios to all customers or include HD Radio capability as a function on all future satellite radio equipment would only harm satellite radio's ability to compete in the audio entertainment market. *See* Entravision Holdings at 21; NPR at 20.

359 Public Knowledge at 5; MAP at 5.

interest and educational content—even absent a government mandate—because such programming is attractive to consumers. This programming includes numerous news channels, public affairs channels, and XM's planned POTUS '08, a channel dedicated to the 2008 Presidential Election. The public interest is also served by Emergency Alert channels (XM 247 and Sirius 184) and channels dedicated to medical professionals (ReachMD), national weather channels, and channels in Spanish, French, Korean, and other niche and educational programming.

Moreover, the FCC should reject requests that the federal government use this proceeding to advantage certain competitors and industries. For example, the Commission should disregard calls for the agency to regulate the composition of the companies' combined board of directors or automobile dashboards.[360] Likewise, the Commission should dismiss the request of the recording industry that the Commission insert itself into the ongoing copyright royalty litigation before the Copyright Royalty Board.[361] And the Commission should reject Rockwell Collins' proposal to require the combined company to maintain two satellite based weather services after

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[360] *See* Slacker at 3 (proposing that the merged company be forced to terminate any exclusive contracts and not be allowed to have any car manufacturers represented on its board of directors). According to CRA, "[t]hese requests for conditions provide direct evidence of the fact that satellite radio faces competition from other technological platforms. There is, however, no need for such conditions. The auto makers have sufficient bargaining leverage with suppliers such as the merged firm, and competitive incentives in the automobile market, to resist demands for dashboard exclusivity." CRA Competitive Effects Analysis at 60 (¶ 114).

[361] RIAA specifically proposes that the Commission condition the merger on Sirius and XM "acknowledg[ing] . . . that the merged company should pay the same rates as other digital music service companies for compulsory copyright licensing." RIAA at 8. Sirius and XM submit that the CRB is fully capable of adjudicating this dispute and of sorting out any relevant information arising from the merger.

the merger and to require the companies to deal with all parties on a non-discriminatory basis.[362] The companies submit that decisions regarding the ancillary services provided by the combined company are best left to the marketplace.

IX. CONCLUSION.

For all these reasons, the proposed merger of XM and Sirius clearly would produce enormous public benefits that could not be achieved without the merger, and should be approved.

Respectfully Submitted,

/s/ Patrick L. Donnelly

/s/ Dara F. Altman

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July 24, 2007

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[362] *See* Rockwell Collins at 5.

EXHIBIT A

SIRIUS-XM JOINT OPPOSITION
MB Docket No. 07-57
July 24, 2007

CRA INTERNATIONAL,
ECONOMIC ANALYSIS OF THE COMPETITIVE EFFECTS OF THE SIRIUS-XM MERGER

REDACTED

FOR PUBLIC INSPECTION

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
XM Satellite Radio Holdings Inc. Transferor	)	
	)	
and	)	MB Docket No. 07-57
	)	
Sirius Satellite Radio Inc. Transferee	)	
	)	
Consolidated Application for Authority to Transfer Control of XM Radio Inc. and Sirius Satellite Radio Inc.	)	

ECONOMIC ANALYSIS OF THE COMPETITIVE EFFECTS OF THE SIRIUS – XM MERGER

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July 24, 2007

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I. INTRODUCTION AND EXECUTIVE SUMMARY

1. These Reply Comments provide an economic analysis of the merger of Sirius Satellite Radio Inc. (hereinafter "Sirius") and XM Satellite Radio Holdings Inc. (hereinafter "XM") and reply to Comments submitted by other participants in this proceeding. The authors are Steven C. Salop, Professor of Economics and Law at Georgetown University Law Center, and Senior Consultant at CRA International; Steven R. Brenner, Vice President at CRA International; Lorenzo Coppi, Vice President at CRA International; and Serge X. Moresi, Vice President at CRA International. We have been retained by Sirius and XM. Our Curricula Vitae are attached as Exhibit A.

2. We are confident that the overall effect of the merger of Sirius and XM will be procompetitive, even though the merger will eliminate existing rivalry between the merging firms. It will lead to an increase in the number of subscribers of the merged firm, not a decrease in output. The merger will reduce the level of prices relative to what likely would prevail if the merger does not occur. Moreover, competition in the market for audio entertainment will increase from the merger, and consumers will benefit. This is in part because the market is broader than satellite radio, including other audio entertainment devices, content and services. Competition in this market is already intense and will increase over time as the functionality of devices converges – a trend illustrated most recently by the iPhone – and wireless mobile connectivity improves. Competition also will increase because the merger will lead to a variety of procompetitive efficiencies, including cost-reductions, product quality improvements, and increased incentives for low penetration pricing as well as for demand-enhancing and cost-reducing investments. These efficiency benefits likely also will spur more investment and innovation by other competitors in the market.

3. Thus, we disagree with the Comments that argue for a very narrow satellite radio-only market that ignores the reality of consumer substitution across many differentiated products (as well as ignoring differentiation between XM and Sirius), and is confined to a static analysis that ignores the fact that demand is dynamic and competition is both dynamic and increasing over time. We also disagree with the Comments that argue that the merger will fail to offer real efficiency benefits. Our conclusion that the merger likely will be procompetitive holds regardless of how the relevant market is defined.

4. Audio entertainment is a dynamic market and this dynamism broadens the scope of competition and substitution.

- Satellite radio is still in a growth phase and consequently Sirius and XM have powerful incentives to focus on attracting new subscribers from people who currently listen to terrestrial radio and other media, rather than on trying to divert subscribers from one another. There were fewer than 14 million subscriptions to Sirius and XM at the end of 2006, a level insufficient to cover the substantial costs of the two services. Current projections are for the firms to almost double their combined penetration by the end of 2010. To accomplish this, they also must replace exiting subscribers, very few of whom switch from one satellite service to another. If the annual churn rate is 20%, they would have to add about 28 million new subscribers to replace the lost subscribers and achieve the forecast growth in subscribers. Sirius and XM could not come close to reaching their projections by simply trying to divert subscribers from each other. Sirius and XM instead must set prices with a focus on the goal of overcoming the inertia of the approximately 95% of the population who do not subscribe to satellite radio.
- The audio entertainment market is not likely to tip to satellite radio in the future. Projections indicate that satellite radio service will continue to have a fairly small share of the audio entertainment market for many years. In fact, lower than expected subscriber numbers, due at least in part to current inter-modal competition and recognition of emerging competition over time, led last year to significant downward revisions in satellite radio subscriber projections by a number of analysts.
- Competition already is substantial today. It also is intensifying over time and thus the demand facing the merged firm is likely to become more elastic. Terrestrial radio broadcasters will continue to adopt HD radio technology. Broadcasters even may be able to use recently developed encryption technology to license HD radio programming on a subscription basis like satellite radio. Competition and potential substitution in response to higher prices will increase as music, news, and sports content increasingly are delivered over wireless phones, including those connected to auto sound systems, and wireless technology improves to permit more robust Internet service in moving vehicles. The introduction of Internet service in vehicles is already beginning. As Internet radio becomes widely available in vehicles, listeners will have thousands of stations from which to choose, just as they do now at home.
- Demand for satellite radio involves a dynamic demand spillover effect. This dynamic spillover effect occurs because satisfied consumers display, explain, demonstrate, and recommend the product to other potential customers, as well as because that consumer base reduces the uncertainty of potential new subscribers about the viability of the product in the marketplace and sets off and maintains a bandwagon effect. Creating a "buzz" helps establish a product category in the eyes of potential customers, as well as with the distributors – retailers and OEMs – all of whom have a number of options for audio products to utilize or distribute. Indeed, the satellite radio companies devote substantial effort to monitoring and maintaining subscriber growth rates, as any

slowdown may be interpreted as a sign the product category is not succeeding, and such a market judgment may be irreversible. (As one report put it, "the buzz may be killed.") In this situation, firms have an immediate incentive to engage in low "penetration pricing" and other demand-increasing investments to overcome consumer inertia and exploit the dynamic spillover effect to maximize longer-run profits, rather than simply trying to maximize short-run profits. This inherently longer-run marketing focus and the resulting emphasis on penetration pricing will continue – and indeed increase – after the merger and must be taken into account in the economic analysis of market definition and the competitive effects of the merger.

5. Carrying out a market definition analysis, it is clear that the market is broader than satellite radio-only. Sirius and XM compete in an audio entertainment market, not only with one another but also with other forms of audio entertainment products. These products include, among others, devices such as terrestrial radio (both analog and HD radio), iPods and other MP3 players, audio content-enabled wireless phones, and the content and services listened to on these devices. These products are differentiated along various dimensions, but they nonetheless compete. Sirius and XM are relatively small players in the audio entertainment market, with only about 14 million subscriptions as of the end of 2006. Sirius and XM together have a combined market share of only **[[REDACTED]]**% to **[[REDACTED]]**%, depending on which data source and share measurement is used. In contrast, the market share of terrestrial radio is much larger, between **[[REDACTED]]**% and **[[REDACTED]]**%, depending on the data source and share measure. The merger will not have a significant effect on market concentration, increasing the HHI by less than **[[REDACTED]]** points. (Even if the market were defined only as terrestrial and satellite radio, the HHI would increase by less than 50 points.)

6. This broad market definition is supported by evidence of substantial buyer substitution and seller competitive responses among these different types of audio entertainment products. Substantial usage and survey data supports the conclusion that customers treat satellite radio and other products as reasonable substitutes in that broad market. This evidence includes usage data showing that when people subscribe to satellite radio, their usage of alternate audio entertainment products such as terrestrial radio and MP3s goes down; when they disconnect from satellite radio, their usage of these alternate products goes up. In addition, the data on disconnections show that only about **[[REDACTED]]** of subscribers who disconnect from one satellite radio service churn to the other satellite radio service. The evidence therefore strongly supports the fact that there are a large number of substitutes available to satellite radio subscribers, as well as the fact that XM and Sirius are highly differentiated from each other as a practical matter. Further, data show an inverse relationship between satellite radio penetration and the number of terrestrial stations that are received: when there are fewer terrestrial stations, satellite radio penetration is higher. The AAI (a commenter critical of the transaction) suggested this relationship as a test of the

cross-price elasticity of demand between satellite and terrestrial radio. Further evidence of competition and demand substitution between the formats includes the following:

- **Terrestrial Radio:** Every satellite radio subscriber previously listened to AM/FM radio, and many eventually churn from satellite radio back to terrestrial radio. Sirius advertises itself as the "best radio on radio." XM's initial advertising campaign was "Beyond AM, Beyond FM…XM Radio." Terrestrial radio is free and broadcasters have run their own ad campaigns, such as "Radio: You shouldn't have to pay for it." Terrestrial radio also has responded to competition from satellite radio by reducing the number of commercials and by rolling out HD radio, which increases channel capacity, improves sound quality and is commercial-free for side channels. Advertising to promote HD radio in 2007 is expected to be about $250 million, **[[REDACTED** [redacted]]]. Clear Channel also now makes some of its programming content available on wireless phones through mSpot radio.
- **Wireless Phones:** Almost all wireless carriers offer phones enabled for listening to music, sports, news, talk and other audio entertainment content. The number of these phones that have been sold is growing rapidly and is expected to reach 28 million by the end of this year (about twice the current number of activated satellite radios). Wireless phone competitors are offering a large and growing number of audio services, including news and sports as well as music, that subscribers can enjoy on the go or, increasingly, in the car. For example, Sprint offers numerous audio streaming packages, including content from Pandora, mSpot Radio, Music Choice, Rhapsody, as well as Sirius. AT&T offers content from Napster, and Yahoo!, as well as XM. Alltel offers the Axcess Radio audio streaming package, as well as a streaming service from XM. Verizon VCast service offers streaming sports programming and audio downloading. Services like Mercora M and Mobzilla also offer audio streams to wireless phone subscribers with Internet access. In response, Sirius and XM have offered their content on a wholesale basis through various wireless networks including Sprint, Alltel, and AT&T. These wireless phones may be connected for audio listening to many auto sound systems, both through auxiliary input jacks and, increasingly, through new technologies such as the recently-introduced Ford Sync product. Sprint also has just announced a new phone that connects through the FM radio.
- **iPods/MP3 Players:** Sellers of iPods and other MP3 players, which are commercial-free and offer high quality sound, have introduced podcasts and facilitated delivery of individual songs, news, and talk programming and subscription-based audio (such as Rhapsody, Yahoo! and Napster) at home and at Wi-Fi hotspots, as well as on some wireless phones. The new Slacker product will introduce a music service delivered to portable devices both over the Internet and Wi-Fi and Ku band satellite capacity. XM and Sirius have introduced radios that can store audio. iPods and MP3 players also can be connected to many car stereo systems through auxiliary input jacks and, in addition,

automakers now offer a docking option that integrates iPods operation with the car stereo in about 70% of new cars.

- **Internet Radio:** There are thousands of Internet radio stations available to home listeners, and every week millions listen to Internet radio. In response, Sirius and XM stream their services over the Internet to subscribers, as do some terrestrial radio stations. Internet radio content already can be streamed over wireless phones or packaged into podcasts for MP3 players and wireless devices, and used away from home and in vehicles. The new Slacker service will provide Internet-based service. As Internet service becomes even more widely available in vehicles, listeners will have access to the unlimited variety of audio content offered on the Internet. Indeed, Avis already offers Internet in its rental cars via Autonet, and the *Wall Street Journal* has reported that Slacker and Pandora have had talks with the OEMs about installing their technologies in automobiles.

- **Channel Variety: [[REDACTED** [redacted]]]. Wireless phone carriers offer radio channels to data plan subscribers at low prices. AT&T offers 50 channels from MobiRadio for $8.99 per month. Alltel offers 40 channels through the Axcess music streaming service for $6.99. Sprint offers a variety of streaming services from Pandora, Rhapsody and MSpot for less than $6 each. Owners of MP3 players can achieve enormous musical variety by subscribing to a subscription service like Rhapsody, Yahoo! or Napster, which are priced at less than $15 per month, and loading their players from a huge library, including playlists formulated by others. Sports and news programming also is available through AM/FM radio, Internet streaming, and increasingly through wireless phones.

- **Sound Quality and Commercials:** Sirius and XM offer commercial-free service and high quality sound (the latter on factory-installed radios). However, these factors are not significant for most of their subscribers. **[[REDACTED** [redacted]]]. Moreover, the sound quality of satellite radios can vary depending on installation. Commercial-free and high quality audio also is available for listening through MP3 players, wireless phones, and HD Radio stations.

- **Product Differentiation between Sirius and XM:** Sirius and XM are differentiated from one another, as are the other audio entertainment products. This differentiation reduces the degree of demand substitution between Sirius and XM, *ceteris paribus*, relative to their degree of substitution with other audio entertainment products. Sirius and XM are differentiated because their radio equipment is not compatible. Almost all auto manufacturers offer only one of the satellite radio services installed and integrated. The proportion of new satellite radio subscribers who are new automobile buyers with satellite radios integrated into the auto sound system is growing over time. In the first quarter of 2007, aftermarket net additions were only 21% of all net additions for XM and 35% of the total for Sirius. This reduces the incentives to substitute between Sirius and XM because switching requires the purchase of a new aftermarket receiver (or, improbably, a new car) that often would have a more complicated and less integrated installation and inferior sound. Subscribers with an aftermarket receiver also would incur switching costs because they would need to purchase a new receiver to switch to the other satellite service. Sirius and XM also are differentiated from each other because of their exclusive offering of certain high-value content. As a result, very few subscribers quit one satellite radio service to subscribe to the other.

7. The competitive effects of the merger of Sirius and XM are unlikely to be harmful. The audio entertainment market is too unconcentrated and complex to support a coordinated effects theory. Adverse unilateral effects are unlikely because the relevant market is broad; the merged firm will have a very low market share; inter-modal competition is significantly increasing; there are ample opportunities for rival repositioning and entry; and the merger will generate cognizable merger-specific efficiencies.

8. In fact, the merger of Sirius and XM will be procompetitive. The merger likely will increase output and competition in the audio entertainment market by reducing the merged firm's costs, improving product quality, and enhancing incentives for penetration pricing as well as incentives for other demand-increasing and cost-reducing investments. Even if the market were erroneously defined as satellite radio-only, this conclusion would not change.

    - The merger will reduce the costs faced by the combined firm, giving it the ability and incentive to reduce prices.

    - The merger will create more desirable products. The merger will lead to satellite radio subscribers obtaining a larger and more desirable mix of channels, because content that is now currently exclusive will be made available on both platforms and because interoperable radios will be introduced more rapidly and promoted more intensively as the merger resolves the current free-rider problems.

- The merger will decrease incentives for price increases and immediately increase incentives for demand-expanding and cost-reducing investments by resolving the free-rider problem that is inherent when demand is dynamic. Today, without the merger, low prices and high promotion by either supplier attract the interest of potential subscribers to satellite radio generally. For example, if Sirius were to reduce its price or increase its promotion, that would attract attention to satellite radio generally and some of the new consumers would end up subscribing to XM instead of Sirius. The resulting free-rider problem limits to some degree each firm's unilateral incentives for procompetitive penetration pricing in the pre-merger world. The merger will resolve this free-rider problem, dampening the incentives for price increases and enhancing the incentives for price decreases. Similarly, because of the dynamic demand spillover effect, the merger will increase the returns realized on other demand-increasing and cost-reducing investments, and thus will increase the incentives to engage in such investments. These effects also will lead to increased output and lower satellite radio prices.
- **[[REDACTED** [redacted]]].

9. A concern has been raised that the merger will eliminate the most important competition that exists in areas with very few terrestrial radio stations and will lead to geographic price discrimination. Some Comments have erroneously argued that this merger is like the rejected DirecTV-Echostar satellite TV merger. The level and pattern of penetration rates differ substantially between satellite TV and satellite radio. DBS penetration in uncabled areas is 68%, about 53 percentage points greater than the 15% penetration rate in cabled areas. In contrast, satellite radio penetration in the areas with six or fewer AM/FM stations is only **[[REDACTED]]**%, about **[[REDACTED]]** greater than the **[[REDACTED]]**% penetration rate in areas with more than six AM/FM stations. **[[REDACTED** [redacted]]], suggest a combination of two economic factors – satellite radio faces more competition and consumers find satellite radio more dispensable in such areas than satellite TV in uncabled areas.

10. The merger will not lead to geographic price discrimination in these areas. It is true that that the penetration of satellite radio is somewhat higher in areas where there are fewer terrestrial radio signals, a fact that demonstrates that terrestrial radio and satellite radio are good substitutes. However, our analysis shows that geographic price discrimination likely would not be profitable for a number of reasons and so would not be attempted.

- The fraction of the population in those areas with very few AM/FM stations and the magnitude of the elevation in satellite radio penetration are too small to support a profitable price discrimination strategy. Only a very small proportion of the population lacks access to terrestrial radio. Just 2% of the continental U.S. population and just over **[[REDACTED]]**% of satellite radio subscribers live in areas with six or fewer terrestrial radio signals.

- Price discrimination against such a narrow group of subscribers would be too costly and imperfect for several reasons, including the following: (i) consumers in targeted areas could evade the discrimination by purchasing equipment from Internet retailers at lower prices, and some consumers could avoid subscription price discrimination by using their business addresses instead of their home addresses; (ii) price discrimination against targeted new car purchasers would require the acquiescence and cooperation of the auto manufacturers and dealers; (iii) the discrimination strategy would be imperfectly targeted because factors other than the number of AM/FM stations also affect a consumers' willingness-to-pay, including income and where and how much a person drives and listens to the radio (as opposed to where the person lives). In fact, satellite radio penetration varies greatly among areas that receive the same number of AM/FM stations).

- If the geographic area and population targeted for discrimination were expanded to include those areas with somewhat more AM/FM stations, the difference in penetration rates between the targeted and untargeted areas would shrink further, making it too small to support profitable price discrimination with its unavoidable costs and imperfections. For example, in areas with fifteen or fewer AM/FM stations, the average satellite radio penetration rate is only **[[REDACTED]]** higher than the average penetration rate where there are more than fifteen AM/FM stations (*i.e.*, **[[REDACTED]]**), and **[[REDACTED** [redacted]**]]**. Coupled with the fact that willingness-to-pay also depends on other factors such as income (which is positively correlated with the number of stations), such imperfect price discrimination likely would be unprofitable.

11. As this analysis predicts, there is no geographic price discrimination now. In light of the product differentiation and switching costs between Sirius and XM, such price discrimination might have been expected if there were no other competition and the costs and imperfections of discrimination were not a substantial barrier.

12. Some Comments have argued that the merger raises concerns because it would eliminate bidding competition between Sirius and XM for exclusive high-value content, such as MLB, NFL and Howard Stern. Others have argued that the merger raises concerns because it would eliminate bidding competition between Sirius and XM for automobile OEM distribution contracts. In this market, where the incentive for penetration pricing is powerful and competition from other audio entertainment products is strong and intensifying, cooperation in contracting with these suppliers would benefit consumers, not harm them. For these same reasons, there is no competitive concern regarding any anticompetitive exercise of monopsony power.